

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

DIRECTOR'S OFFICE

CONSTRUCTION CODE

Filed with the Secretary of State on November 17, 2003.

These rules take effect December 31, 2003

(By authority conferred on the director of the department of consumer and industry services by section 4 of 1972 PA 230 and Executive Reorganization Order No. 1996-2, MCL 125.1504 and 445.2001)

R 408.30901a, R 408.30902a, R 408.30906a, R 408.30907a, R 408.30908a, R 408.30909a, R 408.30910a, R 408.30918a, R 408.30923a, R 408.30935a, R 408.30936a, and R408.30995a of the Michigan Administrative Code are amended and R 408.30945a is added to the code as follows:

PART 9A. MECHANICAL CODE

AMENDMENTS AND ADDITIONS TO BASIC MECHANICAL CODE

R 408.30901a Adoption by reference of international mechanical code.

Rule 901a. The provisions of the international mechanical code, ~~//2000//~~**2003** edition, except for sections 103.2, 103.4, 104.2, 106.5.1 to 106.5.3, 107.1.2 to 107.1.2.3, 109.2 to 109.7 and appendix B govern the construction, alteration, relocation, demolition, use and occupancy of buildings and structures. With the exceptions noted, the code is adopted in these rules by reference. All references to the International Building Code, International Residential Code, International Energy Conservation Code, International Electrical Code, International Mechanical Code, and International Plumbing Code mean the Michigan Building Code, Michigan Residential Code, Michigan Uniform Energy Code, Michigan Electrical Code, Michigan Mechanical Code, and Michigan Plumbing Code respectively. The code is available for inspection at the Okemos office of the Michigan department of consumer and industry services, bureau of construction codes **and fire safety**. The code may be purchased from the ~~//Building Officials and Code Administrators International, Incorporated, 4051 Flossmoor Road, Country Club Hills, Illinois 60478//~~**International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041**, or from the Michigan Department of Consumer and Industry Services, Bureau of Construction Codes **and Fire Safety**, 2501 Woodlake Circle, Okemos, Michigan 48864, at a cost as of the time of adoption of these rules of ~~//\$40.00//~~**\$45.00** each.

R 408.30902a Licensing requirements.

Rule 902a. Section 101.2 of the code is amended to read as follows:

101.2. Scope. This code regulates the design, installation, maintenance, alteration, and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code

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shall also regulate the mechanical systems, system components, equipment, and appliances specifically addressed in this code.

Exceptions:

1. Mechanical systems within 1- and 2-family dwellings shall be constructed and maintained in accordance with the Michigan residential code for 1- and 2-family dwellings.
2. **Mechanical systems in existing buildings undergoing repair, alterations, or additions, and change of occupancy shall be permitted to comply with the Michigan rehabilitation code for existing buildings.**

R 408.30906a Work permit; submitting plans and specifications to authority.

Rule 906a. Sections 106.1, 106.2, **106.3**, ~~//and//~~106.4, **106.4.3 and 106.4.4** of the code are amended to read as follows:

106.1. Permits required. ~~//An owner, or//~~A contractor licensed pursuant to 1984 PA 192, MCL 338.971 et seq. who desires to erect, install, enlarge, alter, repair, remove, convert, or replace a mechanical system, the installation of which is regulated by this code, or to cause such work to be done, shall first make application in accordance with the requirements of section 10 of ~~//the act//~~**1972 PA 230, MCL 125.1510.**

Exception: A person who ~~//has obtained a//~~**holds a valid** boiler installer license **issued** under 1965 PA 290, MCL 408.751 et seq. shall secure a permit for the installation of a steam or hot water boiler which carries a pressure of not more than 15 psig **for steam and 160 degrees Fahrenheit for hot water**, and which is located in a private residence or in an apartment building having 5 or less dwelling units.

106.2. Permits not required. A person is not required to obtain a permit to perform mechanical work on any of the following items:

- (a) A portable heating or gas appliance.
- (b) Portable ventilation equipment.
- (c) A portable cooling unit.
- (d) A minor part that is replaced if the replacement does not affect equipment approval or make it unsafe.
- (e) A portable evaporative cooler.
- (f) Self-contained refrigeration equipment and a window-type air conditioner that is not more than 1.5 horsepower.
- (g) A boiler or pressure vessel for which a permit is required by sections 17 and 18 of 1965 PA 290, MCL 408.767 and 408.768.
- (h) An oil burner that does not require connection to a flue, such as an oil stove and a heater equipped with a wick.
- (i) A portable gas burner that has inputs of less than 30,000 Btu's per hour.
- (j) Gas piping limited to 10 feet in length and not more than 6 fittings.

106.3 Application for permit. Each application for a permit with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The contractor who is performing the work shall sign the application. The permit application shall indicate the proposed occupancy of all parts of the building and of that portion of the site or lot, if any, not covered by the building or structure and shall contain the information required by section 10 of 1972 PA 230, MCL 125.1510.

106.4. Permit issuance. The enforcing agency shall review the application, construction documents, and other data filed by an applicant for permit in accordance with 1972 PA 230, MCL 125.1501 et seq. If the enforcing agency finds that the proposed work conforms to the requirements of the act, the code, and all other applicable laws and ordinances thereto, and that all fees prescribed by the act have been paid, then the enforcing agency shall issue a permit to the applicant.

106.4.3. Expiration. Each permit issued by the code official under the provisions of the code shall expire by limitation and become null and void if the work authorized by the permit is not begun within 180 days from the date of the permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is begun for a period of 180 days. Before work is recommenced, a new permit shall be first obtained, provided no changes have been made or will be made in the original construction document and that suspension or abandonment has not exceeded 1 year.

106.4.4. Extensions. A permittee holding an unexpired permit may apply for an extension of the time within which the permittee may begin work under that permit if good and satisfactory reasons. The code official shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause. No permit shall be extended more than once.

R 408.30907a Fees.

Rule 907a. Section 106.5 of the code is amended to read as follows:

106.5. Fees. The fees prescribed by section 22 of ~~//the act//~~**1972 PA 230, MCL 125.1522**, shall be paid to the enforcing agency of the jurisdiction before a permit to begin work for new construction, alteration, removal, demolition, or other building operation may be issued. In addition, an amendment to a permit necessitating an additional fee shall not be approved until the additional fee is paid.

R 408.30908a Means of appeal.

Rule 908a. Section 109.1 of the code is amended to read as follows:

Means of appeal. A person may appeal a decision of the enforcing agency to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules governing construction have been incorrectly interpreted, the provisions of the code do not apply, or an equal or better form of construction is proposed. The application shall be filed under section 14 of ~~//the act//~~**1972 PA 230, MCL 125.1514**.

R 408.30909a Violations.

Rule 909a. Section 108.4 of the code is amended to read as follows:

108.4 Violation penalties. Any person who violates a provision of this code, who fails to conform with any of the requirements thereof, or who erects, installs, alters, or repairs mechanical work in violation of the approved construction documents or directive of the enforcing agency, or a permit or certificate issued under the provisions of this code, shall be fined in accordance with section 23 of ~~//the act//~~**1972 PA 230, MCL 125.1523**.

R 408.30910a Stop work orders.

Rule 910a. Section 108.5 of the code is amended to read as follows:

108.5. Stop work orders. Upon notice from the enforcing agency that mechanical work is being done contrary to the provisions of this code or in a dangerous or unsafe manner, the work shall immediately cease. Notice shall be in accordance with section 12 of ~~the act~~//**1972 PA 230, MCL 125.1512**. A person who is served with a stop work order, except for work that a person is directed to perform to remove a violation or unsafe condition, is subject to the penalty provisions prescribed by section 23 of ~~the act~~//**1972 PA 230, MCL 125.1523**.

R 408.30918a Duct installation.

Rule 918a. Section ~~//603.15.2~~//**603.15.1** is added to the code to read as follows:

~~//603.15.2. Floor flooding. Floor registers or baseboard registers may not be located in any of the following rooms:~~

- ~~-(a) Toilet rooms.~~
- ~~-(b) Bathrooms.~~
- ~~-(c) Washrooms.~~
- ~~-(d) Laundry rooms.~~
- ~~-(e) Utility rooms containing water outlets.~~
- ~~-(f) Kitchens.~~
- ~~-(g) Basements.~~
- ~~-(h) Pools or spa rooms.~~

~~Exception: Baseboard registers may be installed if duct penetrates the floor 1/2 of an inch and if the register is sealed at the floor.~~//**603.15.1. Floor register location. Floor registers located in a room or space containing water closets shall be located a minimum of 3 feet from the water closet.**

R 408.30923a Equipment installation.

Rule 923a. Sections 301.7.1 and ~~//301.17~~//**301.16** are added to the code to read as follows:

301.7.1. Electrical disconnect. The mechanical contractor shall ensure that all equipment has an electrical disconnect switch on, or immediately adjacent to, the equipment.

~~//301.17. Heating system. A dwelling unit shall have a permanent fixed heating system that is capable of producing an indoor temperature throughout the habitable spaces of 70 degrees Fahrenheit (21 degrees Celsius) at a height of 3 feet above the floor.~~//**301.16.**

Heating system. Each dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68 degrees Fahrenheit at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms at the design temperature. The installation of 1 or more portable space heaters shall not be used to achieve compliance with this section.

R 408.30935a Ventilation requirements for commercial kitchens.

Rule 935a Sections 506.1, **506.3.6, 507.1, 507.2.2, 507.9, 507.13.1, 507.13.2, 507.13.3, and 507.13.4** of the code ~~//is~~//**are amended and sections 507.13.5 and 507.16.1.1 are added to the code** to read as follows:

506.1. Ventilation requirements for commercial kitchens. Ventilation for commercial kitchens shall be in compliance with NFPA-96-~~1998~~**2001**, the standard of the national fire protection association listed in chapter 16.

506.3.6 Grease duct clearances. Grease duct systems and exhaust equipment serving a type I hood shall have clearances to combustibles as required by NFPA 96-2001, as listed in chapter 16.

Exception: Listed and labeled factory -built commercial kitchen grease ducts and exhaust equipment installed in accordance with section 304.1 of the code.

507.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of this section and NFPA 96-2001, as listed in chapter 16. Hoods shall be type I or type II and shall be designed to capture and confine cooking vapors and residues.

Exceptions:

1. Factory-built commercial exhaust hoods which are tested in accordance with UL 710, as listed in chapter 16, listed, labeled, and installed in accordance with section 304.1 shall not be required to comply with sections 507.4, 507.7, 507.11, 507.12, 507.13, 507.14, and 507.15 of the code.

2. Factory-built commercial cooking recirculating systems which are tested in accordance with UL 197, as listed in chapter 16, listed, labeled, and installed in accordance with section 304.1 of the code shall not be required to comply with sections 507.4, 507.5, 507.7, 507.12, 507.13, 507.14, and 507.15 of the code.

3. Net exhaust volumes for hoods may be reduced during no-load cooking conditions, where engineered or listed multi-speed or variable-speed controls automatically operate the exhaust system to maintain capture and removal of cooking effluents as required.

507.2.2. Type II hoods. Type II hoods shall be installed where cooking or dishwashing appliances produce heat or steam and do not produce grease or smoke, such as steamers, kettles, pasta cookers, dishwashing machines, and ovens.

Exceptions:

1. Under-counter type commercial dishwashing machines.

2. A type II hood is not required for dishwashers and potwashers that are provided with heat and water vapor exhaust systems that are supplied by the appliance manufacturer and are installed in accordance with the manufacturer's instructions.

3. Ovens used for re-heating foods previously cooked.

507.9. Clearances for type I hood. A type I hood shall be installed with clearances from combustibles as required by NFPA 96-2001 as listed in chapter 16.

507.13.1. Extra-heavy-duty cooking appliances. The minimum net airflow for type I hoods used for extra-heavy-duty cooking appliances shall be determined as follows:

Type of hood	CFM per foot of open perimeter of hood
Wall mounted canopy	550
Single island canopy	700
Double island canopy (per side)	550

Backshelf/pass-over
Eyebrow

not allowed
not allowed

507.13.2. Heavy-duty cooking appliances. The minimum net airflow for type I hoods used for heavy-duty cooking appliances shall be determined as follows:

Type of hood	CFM per foot of open perimeter of hood
Wall mounted canopy	400
Single island canopy	600
Double island canopy (per side)	400
Backshelf/pass-over	400
Eyebrow	not allowed

507.13.3 Medium-duty cooking appliances. The minimum net airflow for type I hoods used for medium-duty cooking appliances shall be determined as follows:

Type of hood	CFM per foot of open perimeter of hood
Wall mounted canopy	300
Single island canopy	750
Double island canopy (per side)	300
Backshelf/pass-over	300
Eyebrow	250

507.13.4. Light-duty cooking appliances. The minimum net airflow for type I hoods used for light duty cooking appliances and food service preparation and cooking operations approved for use under a type II hood shall be determined as follows:

Type of hood	CFM per foot of open perimeter of hood
Wall mounted canopy	200
Single island canopy	400
Double island canopy (per side)	250
Backshelf/pass-over	250
Eyebrow	250

507.13.5. Dishwashing machines. Dishwashing machines shall be installed under a type II hood.

507.16.1.1 Smoke test. The field test identified in section 507.16.1 of the code shall be conducted in accordance with the smoke testing procedures established by the bureau of construction codes and fire safety, which are available at no cost from the bureau's web site at www.michigan.gov/bccfs, or, from the Michigan Department of Consumer and Industry Services, Bureau of Construction Codes and Fire Safety, 2501 Woodlake Circle, Okemos, Michigan, 48864.

R 408.30936a Scope of article.

Rule 936a. Sections 1001.2 **and 1004.4.3** are ~~//is//~~added to the code to read as follows:

1001.2. Boilers. In addition to the other provisions of the code, this article governs the installation, alteration, and repair of water heaters and boilers. The installation of boilers shall be in compliance with the provisions of this code and the Michigan boiler code.

1004.4.3. Working clearance. Clearance shall be maintained around boilers, generators, heaters, tanks, and related equipment and appliances so as to permit inspection, servicing, repair, replacement, and visibility of all gauges. When boilers are installed or replaced, clearances shall be provided to allow access for inspection, maintenance, and repair. Passageways around all sides of the boiler shall have an unobstructed width of not less than 24 inches (457 mm), unless otherwise approved.

R 408.30945a Insulation.

Rule 945a. Sections 604.3 and 1204.1 of the code are amended to read as follows:

604.3. Coverings and linings. Coverings and linings, including adhesives when used, shall have a flame spread index not more than 25 and a smoke-developed index not more than 50, when tested in accordance with ASTM E 84, using the specimen preparation and mounting procedures of ASTM E 2231. Duct coverings and linings shall not flame, glow, smolder, or smoke when tested in accordance with ASTM C 411 at the temperature to which they are exposed in service. The test temperature shall not fall below 250° F (121° C).

1204.1 Insulation characteristics. Pipe insulation installed in buildings shall conform to the requirements of the Michigan uniform energy code, shall be tested in accordance with ASTM E 84, using the specimen preparation and mounting procedures of ASTM E 2231 and shall have a maximum flame spread index of 25 and a smoke-developed index not exceeding 450. Insulation installed in an air plenum shall comply with section 602.2.1.

Exception: The maximum flame spread index and smoke-developed index shall not apply to 1- and 2-family dwellings.

R 408.30995a Automatic sprinkler systems generally.

Rule 995a. Sections 1600.0, 1600.1, and 1600.2 are added to the code to read as follows:

1600.0. Automatic sprinkler systems; fire suppression systems.

1600.1 Scope. The provisions of this article provide the minimum requirements for the design and installation of automatic sprinkler systems in all occupancies, except for 1- and 2-family dwellings.

1600.2. Installations. Installations shall be in compliance with the provisions of the mechanical code. Fire suppression systems shall be in compliance with the provisions of the building code and shall be installed in accordance with the code and NFPA-13-1996, NFPA-13D-1996, ~~//and//~~NFPA-13R-1996, **and NFPA-24-2002** installation of sprinkler systems, installation of sprinkler systems in 1- and 2-family dwellings and manufactured homes, and installation of sprinkler systems in residential occupancies up to 4 stories in height, standards of the national fire protection association listed in chapter 16.